

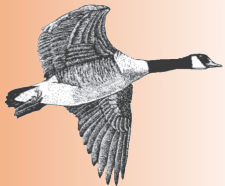
The Flyway

Fall 2016

Quarterly newsletter for Billy Frank Jr. Nisqually and Grays Harbor National Wildlife Refuges

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Save the Dates!

**The 2017
Grays Harbor
Shorebird
and Nature
Festival will
be held
May 5-7
in Hoquiam.**

Purple Martin Nest Discovered in Restoration Snags

By Michael Schramm

Walking past the twin barns and up atop the dike onto the gravel Estuary Trail, visitors encounter a dramatic shift in the scenery from lush forest to open grassland. The flat plain of the Nisqually delta stretches out to the horizon. Beyond the grassland, estuary mudflats extend out to Puget Sound. Rising up from the grass are a number of dead trees, called snags. They are incongruous, rising as they do from an otherwise featureless plain. How did they get here?

The trees did not actually grow in place, where they presently stand. They originally grew on the sides of the old Brown Farm Dike, which had been built in 1904. When the dike was removed in 2009 as part of the delta restoration, biologists decided to try and use the largest trees. Somewhat spontaneously, they floated the idea of placing the snags in the grassland area at the upper end of the tidal zone, hoping the dead trees might be used by raptors for perching. The snags were also considered mitigation for the loss of trees and habitat along the old dike.

Over the past few years, visitors have enjoyed clear views of Bald Eagles, Peregrine Falcons, Northern Shrikes, Kestrels, Cooper's Hawks, Red-tailed Hawks, and Merlin as they utilize the snags to hunt or rest. A number of

songbirds use the snags as well. But this summer we witnessed something entirely new.

Starting in mid-June, Purple Martins became a regular presence in the vicinity of the snags. Purple Martins are the largest species of swallows in North America. West of the Rockies, they are mostly common only on the Pacific coast, where they nest during the summer

before returning to Bolivia and Brazil for the winter. Their presence at the Refuge is unusual under any circumstances. A colony of Purple Martins nest in boxes at the Nisqually Reach Nature Center, located on the north-west corner of the Refuge, but they rarely make it to any areas where visitors are likely to observe them. They typically are seen only a few times each year.

Over the weeks following the initial sighting in June, their continued

Continued on page 6



A male Purple Martin approaches the nest carrying a dragon fly while two female Martins look on. Photo by Michael Schramm/USFWS.

New Faces Around the Refuge!

Vashti Engebretson joins the Refuge this fall as the new Grays Harbor Education Coordinator and AmeriCorps intern. Vashti will be travelling to the third and fourth grade classrooms in Grays Harbor County where she will educate students on a variety of topics with a focus on migratory shorebird ecology. Her goal is to help local children discover the unique ecosystem right on their doorstep and give them information that will encourage an appreciation and sense of stewardship for this environment. Vashti is also excited to help plan and take part in the annual Grays Harbor Shorebird Festival in the spring.



Vashti grew up on the Olympic Peninsula. When she finds herself with spare time, she enjoys playing guitar and singing, reading, bicycling around town, and hiking in the woods. In fact, she spent most of her youth admiring nature. This admiration grew into a deeper curiosity during her pursuit of a biology degree at Lewis & Clark College in Portland, Oregon. During these years, she eagerly used most of her free time to work as a teaching assistant for ecology labs and did summer field research programs in the forests of Oregon.

These experiences deepened her appreciation for natural science and education. Vashti believes in the impor-

tance of youth environmental awareness and encouraging children to spend more time outside observing and connecting with nature. She is delighted to dive into environmental education. Not to mention the perks: she can look right outside her office to find bullfrogs, otters, and even elusive Green Herons.

Kathleen Hoza, the new Environmental Education Coordinator and AmeriCorps intern for Billy Frank Jr. Nisqually National Wildlife Refuge, is a native Olympian returning from Boston. She's excited to be back home to see family, friends, and the beautiful natural environments of Washington. Previous opportunities to work with outdoor programs for youth include being part of the leadership team for a Forestry Leadership program this summer and, in the more distant past, counseling at a summer camp located near Duvall. She has also volunteered with several different education programs, including tutoring for special needs classrooms and



being an intern with Teach for America program. Her new position at the Refuge combines her interest in education with excitement about the Pacific Northwest outdoors.

Her time at the Refuge will be a divergence from her education – she recently graduated from MIT with a

Bachelor of Science in Aeronautical and Astronautical Engineering. She spent close to a year as an intern at NASA's Jet Propulsion Laboratory working with the Engineering Operations Team for Curiosity, the most recent rover to land on Mars. Kathleen sees space research as one more way to explore and appreciate the natural beauty of the universe. She retains a strong interest in seeing where we can go and what we can learn beyond this Blue Planet we love.

In her spare time, Kathleen likes to get into the mountains. She rock climbs, and says "I pretend I play the guitar." She also had the chance to be part of a program called World Wide Opportunities on Organic Farms, which helps participants to set up stays with host families around the world. Her trip was to South America, where she volunteered in Argentina and Bolivia and also traveled through Peru. ✂

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Save trees, think green.

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Connecting Kids with Nature

By Susie Hayes

Nature can be a great teacher. At any age observing, thinking, and learning about our natural world gives us a sense of wonder, order, and joy. For children, education research reveals how authentic experiences in nature can:

- ▶ Improve test scores, attendance, and attitudes toward learning
- ▶ Positively affect child physical, social, interpersonal, and aesthetic development
- ▶ Alleviate symptoms of ADHD and ADD
- ▶ Help ELL (English Language Learners) learn new vocabulary
- ▶ Improve child health
- ▶ Allow children who learn differently from others to become leaders and shine

(Minnesota Department of Natural Resources; 2016)

We have a unique opportunity here at the Refuge to offer children of all ages guided nature walks and activities on our well maintained trails and additional educational activities in our education building. Davy Clark, our Education Coordinator, has been building this program for the past 6 years. His vision for the education program has brought about positive, tangible programs for students and teachers. Every year we see new activities, ideas for kids to experience and learn about nature. New volunteers have been added each

year, bringing their passion for observing, thinking, and learning about our natural world. The result has been a steady increase in educators bringing students to the Refuge.

The past two years have seen significant increase in the number of students, teachers, and chaperones. This past year (Oct 2015 – Sept 2016) there were a total of 10,027 participants, a 15% increase from the previous year. The year before there was a 17% increase! So that's a huge increase in the number of participants in the education program over the last two years. Phenomenal!!! Many factors have contributed to this increase, but none more than having Danika Didur-Tate work as a second Education Coordinator with Davy. Together they collaborated, created, divided duties, but most of all they both really cared about the quality of the program and the environmental educational experience for every child. They also worked closely with teachers to connect with what was being taught in the classroom and the activities offered at the Refuge. Many teachers create science units that culminate with a visit to The Billy Frank Jr Nisqually National Wildlife Refuge. More and more teachers are realizing the treasure we have right here in South Puget Sound. The scheduling process has become so intense that this year, Davy is requiring all teachers to wait until January to sign up for spring field trips; this should keep things fair and allow everyone an opportunity to visit.

One teacher wrote, "My class had a wonderful time visiting the refuge! After the investigation in the Education Center, we got to enjoy so much in nature by taking the

time to **see** with new eyes! Hope to see you next year." So many kids reaping the benefits of connecting with nature. ✎



Students enjoy a field trip at the Refuge last spring. Photo by Michael Schramm/USFWS.

Ceremonies Celebrate Renaming of Refuge and Creation of National Memorial

By Michael Schramm

This July, the Refuge hosted two celebrations in rapid succession. The first, on July 19th, celebrated the re-naming of the Refuge from Nisqually National Wildlife Refuge to Billy Frank Jr. Nisqually National Wildlife Refuge. The second was a tribal celebration held July 31st, celebrating the creation of Medicine Creek Treaty National Memorial. Both these changes are the result of the Billy Frank Jr. Tell Your Story Act passed by Congress last December.

The July 19th event was attended by Secretary of Interior Sally Jewel, U.S. Rep. Denny Heck (who wrote the Tell Your Story Act), U.S. Rep. Derek Kilmer, Senator Maria Cantwell, former U.S. Rep. Norm Dicks, and a variety of tribal leaders including Nisqually Indian Tribe Chairman Farron McCloud, Muckleshoot Indian Tribe Councilman Louie Ungaro, and Squaxin Island Tribe Councilman Jim Peters. Over a dozen speakers delivered inspirational stories and insights about Billy Frank Jr and the significance of the Refuge being named in his



Canoes from each of the Treaty Tribes approach the Estuary Boardwalk Trail. Photo by Michael Schramm/USFWS



Spectators in traditional garb look on as canoes land near the head of the Nisqually Estuary Boardwalk Trail. Photo by Michael Schramm/USFWS

honor. The Nisqually Canoe Family offered prayer and songs as a bald eagle soared overhead. The event was a deeply moving tribute to Billy Frank Jr and his legacy.

The tribal ceremony on July 31st, a part of the Canoe Journey hosted this year by the Nisqually Tribe, was held where the Estuary Boardwalk meets the Estuary Dike Trail. Canoes from each of the Medicine Creek Treaty Tribes arrived and landed. Speeches were made commemorating the treaty while a mostly tribal audience of several hundred spectators looked on. The ceremony was within sight of the Medicine Creek Treaty grove, where the treaty was signed in 1854. The presence of the canoes, and participants and specta-



Rep. Denny Heck, Secretary of Interior Sally Jewel, and Nancy Shippentower-Games of the Puyallup Tribe of Indians listen to a speaker during the July 19th renaming celebration.

Photo by Michael Schramm/USFWS.

tors in a blend of traditional costume and modern dress echoed the past while also embodying the profound collision of cultures that followed the Treaty's signing. The creation of the National Memorial offers an opportunity for tribes to tell their story.

During the ceremony on July 19th, Rep. Denny Heck quoted Billy Frank Jr.: "I don't believe in magic. I believe in the sun and the stars, the water, the tides, the floods, the owls, the hawks flying, the river running, the wind talking. They're measurements: They tell us how healthy things are, how healthy we are. Because we and they are the same." Let us hope that the creation of the National Memorial and the preservation of the delta will be remembered as steps in the right direction. ✎

Ode to Pollinators

Danika Didur-Tate has been the Refuge's Education Coordinator for the past two years. Her boundless energy, her passion and caring about the education program touched many children's lives. She connects with nature on many levels and shared that with the people who participated in the education program: students, teachers, and volunteers. Danika left with a creative flair in the Education Center. The following is her artist statement about the new mural:

"Ode to Pollinators" is a mural I installed on the Ed. Center's bathroom doors, constructed completely out of cut paper. The life-sized Indian Plum is surrounded by a panoply of busy native pollinators, including bees, wasps, beetles, butterflies and hummingbirds. While each silhouette is indeed a specific native pollinator, life-sized and exact, there are no labels. This was a deliberate decision. My hope is that this will allow viewers the space to marvel in the beauty of the organisms, wonder at the intimacy of their connection or just appreciate their animacy, without getting hung up on figuring out each name. Names and labels are important, but so are beauty and joy and awe. The theme continues inside the bathrooms, with

gorgeous posters produced by the Pollinator Partnership, and more silhouettes, including non-native pollinators like bats.

I see limitless beauty in nature and ecology, and I hope those viewing "Ode to Pollinators" will see that, too.

We will miss Danika, but we will always be reminded of her love for nature and teaching.

Thank you Danika! ✎



A detail of Danika Didur-Tates' mural Ode to Pollinators, located in the Education Center building at the Refuge.

Purple Martins

From page 1

presence was an intriguing mystery. But in mid-July, they were seen entering and exiting an old woodpecker cavity in one the snags. A nest! And for the following three weeks, they could be heard and seen chasing away predators. The two parents alternated feeding the young, sometimes carrying large dragonflies to the nest. A second pair of Purple Martins were also constantly present, apparently interested in all the nesting activity.



A female Purple Martin sits in the opening of the nest while a male Purple Martin looks on. Photo by Michael Schramm/USFWS

According to state officials, Purple Martins are rare in the state due to the loss of habitat (old growth deciduous trees) and competition from non-native Starlings and House Sparrows who usurp the nest sites. There are only a handful of natural Purple Martin cavity nests in Washington State. The majority of Purple Martins only nest in manmade nest boxes. But what makes this nest really remarkable is that it is the probably the first record of Purple Martins nesting in a natural snag relocated as part of a restoration project. It's a big deal for restoration projects and conservation work! Let's hope they find their way back to our snags next year! ✂

Fun Facts

- ▶ Spittle bugs, or froghoppers, spend their youth covered by a glob of 'spit' that isn't really spit at all. The foamy glob you've seen on plants during the summer is part plant sap, part bitter-tasting compound produced by the bug, part bubbles, and serves both to protect and to hydrate the spittle bug in the glob's center. And when the bug molts into an adult, it gains the remarkable ability to jump over 24 times its body length!
- ▶ The black-capped chickadee stashes food in thousands of unique hiding places to eat during the winter. In order to remember all this, the chickadee's hippocampus (the part of the brain associated with memory) swells by 30% in the fall! And come spring, when food is plentiful again, it shrinks back to regular size.
- ▶ Mallards have been known to fly as fast as 55 mph when migrating.
- ▶ Tiger swallowtail caterpillars have evolved to look like bird droppings. Who'd want to eat that?
- ▶ Although you can't see it, the majority of earth's oxygen is produced by phytoplankton (microscopic plants that float about in both salt- and freshwater).



- ▶ The Saanich tribe traditionally rubbed the faces of pubescent boys with big-leaf maple leaves, to keep their beards from growing in too thick or bushy.
- ▶ Have you tried stinging nettle yet? It has twice as much iron as spinach, and as much as 25% of the weight can be protein. Just remember to cook it first, or you'll get stung! ✂

Friends of Nisqually NWR Complex

is a 501(c)(3) nonprofit organization established in 1998 to promote conservation of the natural and cultural resources and fund educational and outreach programs at

Nisqually National Wildlife Refuge Complex.

New and Renewing Friends Membership Summer 2016

Senior/Student (\$15)

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Mary Jane Rants
Geoff Apgar
Margaret Hadaway
Virginia Bishop
Bob & Melanie Appel
Sandra Bush
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Corporate/Business Memberships

- ☐ \$250 Business Sponsor
☐ \$500 Community Partner
☐ \$1000 Sustaining Business
☐ \$2500 Corporate Patron
☐ \$5000 + Corporate Benefactor

Please make checks payable to: Friends of Nisqually NWRC, 100 Brown Farm Rd, Olympia, WA 98516

Your tax deductible contribution will help preserve the unique habitats, fish, and wildlife of the Nisqually Delta and the Grays Harbor Tideflats.

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**Friends of Nisqually
National Wildlife Refuge**

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***... conserving, protecting and enhancing fish, wildlife and plants and
their habitats for the continuing benefit of the American people...***

**Planning a field trip to Billy Frank Jr.
Nisqually National Wildlife Refuge?**

Attend one of our free Field Trip Orientation Workshops to get all the tools you need to confidently guide your students on a meaningful outdoor learning experience. You will be introduced to our hands on indoor activities in our education center, hike the Twin Barns Loop Trail, and learn about one of the largest restoration projects in the Puget Sound! Refreshments will be provided.

Workshop Dates:

Saturday December 3rd 9am-1pm

Saturday January 21st 9am-1pm

Saturday February 4th 9am-1pm

Wednesday February 22nd 4pm-8pm

***** Only teachers who have participated in a field trip orientation workshop within the past three years are able to schedule a class for their field trip between May 15 and the end of the school year. Teachers who have attended a workshop since 2011 and scheduled a field trip within the past two years may continue to schedule field trips between May 15th and the end of the school year without re-taking the workshop. *****

Location: Education Center at Nisqually National Wildlife Refuge (From I-5 Take Exit 114 and follow signs)

Clock hours are available for a fee, approved by ESD113.

To Register: Download the registration form from our website

https://www.fws.gov/refuge/billy_frank_jr_nisqually/

Under the Visit tab select **"For Educators"** and then **Teacher Training.**

For more information:

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